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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,991	01/11/2000	David Cushing	2566-105	5026

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EXAMINER
PWU, JEFFREY C

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/480,991	CUSHING, DAVID
	Examiner	Art Unit
	Jeffrey Pwu	3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2000* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,5, & 8* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Abstract

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The present invention" "The invention includes," etc.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.   Claim 1 is vague and indefinite because it is unclear how is the optimal price being discovered or what is a predetermined allocation procedure. It is also unclear of how are the executed shares being allocated fairly among orders.

5.   Claim 10 is vague and indefinite because it is unclear what defines a qualified participant.

6.   Claim 20 is vague and indefinite because it is unclear of what is a predetermined criterion.

7.   Claims 30 and 31are vague and indefinite because it is unclear what is an optimal price.

8.   Dependent claims are rejected for incorporating the defects from the parent claim by dependency.

Claim Rejections - 35 USC § 101

9.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10.   For a claim to be statutory under 35 USC § 101 the following two conditions must be met:

1) In the claim, the practical application of an algorithm or idea result in a useful, concrete, tangible result, and

2) The claim provides a limitation in the technological arts that enables a useful, concrete, tangible result.

See MPEP Section IV 2(b). Also note In re Waldbaum, 173USPQ 430 (CCPA 1972) which teaches "useful arts" is synonymous with "technological arts". In Musgrave, 167USPQ 280 (CCPA 1970), In re Johnston, 183USPQ 172 (CCPA 1974), and In re Toma, 197USPQ 852 (CCPA 1978), all teach a technological requirement.

11.   Claims 1-19, and 30-31 are rejected under USC § 101 because these claims do not recite the use of technological art. With regards to independent claims 1, 10, 30, and 31, the steps , claim 1 for example,

- receiving orders from one or more qualified participants, said orders representing a desire to execute a trade regarding a security;

- concurrently with receiving said orders, transmitting information regarding said orders to said qualified participants;

- terminating the receiving of orders;

- discovering an optimal price at which a maximum number of shares will be executed;

- executing a trade of said maximum number of shares at said optimal price; and

- allocating said executed maximum number of shares fairly among orders that qualify according to a predetermined allocation procedure may infer that the auctions are being conducted by using some type of electronic communication medium, such as a computer, television, telephone, Internet, or radio network, but at the same time, as no technological art is recited in the claims, the steps of receiving orders, allocating shares among orders, and terminating a receiving order could also be done manually without the use of electronic communication medium and is, therefore, directed to a non-statutory subject matter.

12.   Dependent claims are rejected for incorporating the defects from the parent claim by dependency.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14.   Claims 1-31 are rejected under 35 U.S.C. 102(e) as being unpatentable by May (US 6,421,653).

May discloses:

1. A method for conducting a financial batch auction after a first period and before a second period, comprising the steps of:

- receiving orders (flow chart step 562 of fig.27B) from one or more qualified participants, said orders representing a desire to execute a trade regarding a security;

- concurrently with receiving said orders, transmitting information regarding said orders to said qualified participants (steps 562 to 578 of fig. 27B);

- terminating the receiving of orders ("end"; after step 578);

- discovering an optimal price at which a maximum number of shares will be executed (col.9, lines 30-53; "best offer");

- executing a trade of said maximum number of shares at said optimal price (col.5, lines 37-40); and

- allocating said executed maximum number of shares fairly among orders that qualify according to a predetermined allocation procedure (settlement module).

2.   The method for conducting a financial batch auction according to claim 1, wherein said orders include parameters describing a trade side, a security identifier, and a quantity of shares (fig.7).

3.   The method for conducting a financial batch auction according to claim 1, wherein said orders have order types selected from the group consisting of unpriced orders, priced orders, and cross orders (620, 672,684).

4.   The method for conducting a financial batch auction according to claim 1, wherein the batch auction is conducted concurrently with a continuous trading financial market (abstract).

5.   The method for conducting a financial batch auction according to claim 4, wherein one of said first period or said second period comprises a stoppage of trading on said continuous trading market (col.30, lines 41-col.31, line 15).

6.   The method for conducting a financial batch auction according to claim 1, wherein said information transmitted to said qualified recipients comprises an indicated price and a net order

imbalance (it is inherent in a financial batch auction to transmit information to qualified recipients for either an indicated price or a net order imbalance)

7.   The method for conducting a financial batch auction according to claim 1, further comprising the step of:

-      receiving requests to cancel orders and receiving requests to modify orders concurrently with said receiving of said orders (col.55, lines 45-52).

8.   The method for conducting a financial batch auction according to claim 7, wherein said receiving of requests to cancel orders is terminated by a predetermined time before terminating the receipt or orders, and said receiving of orders and said receiving of requests to modify orders are accepted subject to pre-determined conditions (see settlement module 42).

9.   The method for conducting a financial batch auction according to claim 1, wherein during said allocating step, said executed maximum number of shares is distributed pro-rata among orders that qualify (42).

Claims 10-31 are similarly rejected as in Claims 1-9.

10.   A method of performing a batch auction of a security, comprising the steps of:

- compiling an order book, wherein said compiling comprises receiving order information from qualified participants, and entering orders into the order book and modifying or canceling orders within the order book based upon said order information;

- discovering an optimal price, wherein said discovering step comprises identifying one or more prices at which the batch auction would produce a maximum number of executed shares, and selecting one of said one or more prices as an optimal price; and

- executing the batch auction at the optimal price, wherein said executing step comprises crossing orders within the order book at the optimal price, and allocating the executed shares pro-rata among orders having price requirements consistent with said optimal price.

11. The method of performing a batch auction of a security according to claim 10, wherein said order information comprises parameters describing a trade side, a security identifier, and a quantity of shares.

12. The method of performing a batch auction of a security according to claim 10, wherein said orders have order types selected from the group consisting of unpriced orders, priced orders, and cross orders.

13. The method of performing a batch auction of a security according to claim 10, wherein the batch auction is conducted concurrently with a continuous trading financial market.

14. The method of performing a batch auction of a security according co claim 13, wherein the batch auction is performed at the open or close of said continuous trading market.

15. The method of performing a batch auction of a security according to claim 10, wherein said optimal price is selected based upon a relative supply and a demand dictated by said order book.

16. The method of performing a batch auction of a security according to claim 15, wherein said selecting step further comprises comparing said relative supply and demand to a standard.

17. The method of performing a batch auction of a security according to claim 10, wherein during compiling said order book information comprising an indicated price and a net order imbalance is disseminated to qualified recipients.

18. The method of performing a batch auction of a security according to claim 10, wherein said canceling of and modifying of orders within the order book is restricted a predetermined time before said price discovering step begins.

19. The method of performing a batch auction of a security according to claim 10, wherein a designated intermediary is permitted to view said order book and to cover orders for unexecuted shares at said optimal price.

20. A computerized system for performing a batch auction of a security, comprising:

- a computerized network having one or more computers in electronic communication with each other;

- an order receiving program running on one or more of said computers, wherein said receiving program is designed to receive a plurality of messages containing orders from one or more qualified participants, and to accept those orders that meet certain predetermined criteria;

-   an order book database located on one or more of said computers, wherein said order book database communicates with said order receiving program and stores each of said accepted orders received by said receiving program;

-   a price discovery program running on one or more of said computers, wherein said price discovery program refers to said order book database and calculates an optimal price upon which to transact a maximum number of shares of the security during the batch auction;

- a batch auction execution program running on one or more of said computers, wherein said execution program executes the batch auction of said maximum number of shares of the security at a given execution time, and allocates said maximum number of shares of the security among said accepted orders according to a predetermined criterion; and

- a notification program running on one or more of said computers, wherein said notification program publishes a predetermined selection of data from said order book database, and wherein

said notification program notifies said qualified participants of results of said auction execution program.

21. The computerized system for performing a batch auction of a security according to claim 20, wherein said predetermined selection of data published by said price notification program comprises an indicated price and net order imbalance.

22. The computerized system for performing a batch auction of a security according to claim 20, wherein said messages can contain order types selected from the group consisting of unpriced orders, priced orders, and cross orders.

23. The computerized system for performing a batch auction of a security according to claim 20, further comprising an electronic connection for forwarding unexecuted orders to outside markets.

24. The computerized system for performing a batch auction of a security according to claim 20, further comprising communication connections whereby said qualified participants may remotely submit said messages to said order receiving program electronically.

25. The computerized system for performing a batch auction of a security according to claim 24, wherein said qualified participants receive said results of the batch auction electronically from said notification program.

26. The computerized system for performing a batch auction of a security according to claim 20, wherein said predetermined criteria vary within a time interval preceding said execution time.

27. The computerized system for performing a batch auction of a security according to claim 20, wherein said execution time comprises either at an opening or a closing of a continuous trading financial market.

28. The computerized system for performing a batch auction of a security according to claim 20, wherein said execution program allocates said maximum number of shares pro-rata among said accepted orders.

29. The computerized system for performing a batch auction of a security according to claim 20, further comprising an interface for a designated intermediary to view said order book database while said order receiving program is communicating with said order book database.

30. A method for conducting a security batch auction cycle, said auction cycle having an order acceptance period, a price discovery period, and an order execution period, said method comprising the steps of: - during a first of two stages of said order acceptance period:

- accepting requests to enter auction orders into an order book, to modify auction orders within the order book, and to cancel auction orders within the order

book during a first stage of said order acceptance period; and

- selecting data from said order book, and publishing said selected data to one or more qualified recipients;

- during the second stage of said order acceptance period:

- accepting late requests to enter auction orders into the order book if said late requests to enter meet a first set of criteria;

- accepting late requests to modify orders within the order book if said late requests to modify meet a second set of criteria; and

- publishing said selected data within said order book to said qualified recipients (516);

- during said price discovery period:

- identifying one or more prices at which the batch auction cycle would produce a maximum number of executed shares, and selecting one of said one or more prices as an optimal price; and

- during said order execution period:

- executing a trade of said maximum number of shares at said optimal price; and

- allocating said executed maximum number of shares among the orders according to a predetermined criterion (settlement module 42).

31. A method of performing an intermediated batch auction of a security, comprising the steps of:

- receiving a plurality of orders from one or more qualified participants, each of said orders identifying a desire to trade shares of the security;

- providing information to an intermediary regarding said plurality of orders, and accepting orders from said intermediary identifying a desire to trade an excess number of shares (608);

- discovering an optimal price at which a maximum number of said shares identified by said plurality of orders will be executed;

- executing a trade of said maximum number of shares and said excess number of shares at said optimal price; and

- allocating said executed maximum number of shares and said excess number of shares fairly among orders from said qualified participants and said intermediary (42).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Pwu whose telephone number is 703 308-7835

J Pwu

August 5, 2003

JEFFREY PWU
PRIMARY EXAMINER